REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated March 16, 2007 has been received and its contents carefully reviewed. Applicants appreciate the indication by the Examiner that claims 1-10 and 18-23 are allowed.

Claims 11-17 are rejected the Examiner. With this response claim 11 has been amended. No new matter has been added. Claims 1-23 remain pending in this application.

In the Office Action, claims 11-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Related Art (hereinafter "ARA") in view of U.S. Publication No. 2002/0196221 to Morita (hereinafter "Morita") and U.S. Publication No. 2001/0038372 to Lee. Claim 11 is rejected under 35 U.S.C. § 112, second paragraph.

The rejection to claim 11 under 35 U.S.C. § 112, second paragraph as failing to particularly point out and distinctly claim the subject matter regarded by the Applicants as their invention is respectfully traversed and reconsideration is requested. The Examiner cites the limitation "the preset stored modulated data" as not having antecedent basis because only "a stored preset modulated data" is previously recited in the claim. Applicants respectfully disagree that the change in order of descriptors makes unclear the antecedent for "the preset stored modulated data." However in the interest of advancing prosecution of this application, Applicants hereby amend the claim to recite "the stored preset modulated data." Applicants submit that the amendment does not change the scope of the claims.

The rejection to claims 11-17 under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Related Art (ARA) in view of Morita and further in view of Lee is respectfully traversed and reconsideration is requested. Applicants submit that ARA, Morita, and Lee, analyzed singly or in any combination do not teach the combined features of claims.

Claim 11 recites an apparatus for driving a liquid crystal display having a combination of features including "a modulator for comparing the reduced-bit source data of a current frame with reduced bit source data of a previous frame to modulate the source data by retrieving a stored preset modulated data in accordance with a result of the comparison, wherein a bit number of the reduced-bit source data of the previous frame is the same as that of the current frame, and a bit number of the stored preset modulated data is more than that of the reduced-bit source data of each of the previous frame and the current frame, and wherein

the modulator replaces all of the bits of the source data with the stored preset modulated data."

In rejecting claim 11, the Examiner cites FIG. 4 of ARA as teaching "a modulator for comparing the source data of a current frame with source data of a previous frame to modulate the source data by retrieving a stored preset modulated data in accordance with a result of the comparison, wherein a bit number of the reduced-bit source data of the previous frame is the same as that of the current frame."

Applicants note that there is no teaching in ARA of "comparing the reduced-bit source data of a current frame with reduced bit source data of a previous frame to modulate the source data by retrieving a stored preset modulated data in accordance with a result of the comparison, and a bit number of the stored preset modulated data is more than that of the reduced-bit source data of each of the previous frame and the current frame." For example paragraph [0010] of Applicants specification, cited by the Examiner in rejecting claim 11 states, "This high-driving scheme modulates only some of the most significant bits to reduce memory capacity required for hardware implementation." Paragraphs [0017] and [0018] of the Background of Invention of Applicants' specification describe a lookup table that "compares source data using all of the available 8 bits, and the modulated data Mdata pre-stored within the lookup table are 8 bits." In each case the look up table data has the same number of bits as the current and the previous frame source data used to retrieve the look up table data.

The Examiner cites Morita and Lee to cure the deficiencies in the teachings of ARA.

The Examiner first cites paragraph [0022] of Morita as teaching "a bit converter for reducing the number of received source data to generate reduced bit data." Applicants submit that even assuming that the Examiner's conclusion is correct, Morita does not teach "comparing the reduced-bit source data of a current frame with reduced bit source data of a previous frame to modulate the source data by retrieving a stored preset modulated data in accordance with a result of the comparison" and "and a bit number of the stored preset modulated data is more than that of the reduced-bit source data of each of the previous frame and the current frame." Paragraphs [0023]-[0024] of Morita disclose "a frame memory to produce second input data obtained by delaying the output gray-scale data" and "a second table section to produce an over-shooting gray-scale output being in advance stored according

to relation in size between the first input gray-scale data and the second input gray scale data."

Morita discloses example implementations using input data is 8 bits or 6 bits. See Morita paragraphs [0026]-[0029]. Morita discloses look up tables table comparing an *unreduced* number input data ("data of input 1") with reduced bit delayed data ("data input 2") to retrieve data having the same number of bits as data input 1. See Morita, Figs. 8-11. Accordingly, Applicants submit that Morita, singly or in combination with ARA does not teach using a comparison involving "the reduced-bit source data of a current frame" for "retrieving a stored preset modulated data in accordance with a result of the comparison, wherein a bit number of the reduced-bit source data of the previous frame is the same as that of the current frame."

The Examiner then cites Lee as teaching "wherein a bit number of the reduced bit source data of a previous frame is the same as that of the current frame, and a bit number of the stored preset modulated data is more than that of the reduced bit source data of each of the previous and the current frame." In particular, the Examiner cites FIG. 11, and paragraphs [0096]-[0102] of Lee. Applicants respectfully disagree with the Examiner's conclusion regarding the teachings of Lee.

Paragraph [0097] of Lee states in part, "The data gray signal converter 480 receives (n-m) bits of the present frame G_n which are passed through without modification." Paragraph [0102] of Lee further states (emphasis added):

> "The data gray signal converter 480 receives 6-bit R gray signals of the present frame and 6-bit R gray signals of the previous frame, generates modified gray signals considering the 6-bit R gray signals of the previous and present frames, **adds the generated 6-bit gray signals** and the 2-bit LSB gray signals of the present frame, and outputs finally modified 8-bit gray signals Gn'."

Applicants submit that there is no teaching or suggestion in Lee to retrieve an 8 bit value for a comparison wherein "a bit number of the stored preset modulated data is more than that of the reduced bit source data of each of the previous and the current frame." As disclosed in Lee, the 8 bit output Gn' is obtained by adding "the generated 6-bit gray signals and the 2-bit LSB gray signals of the present frame." That is, Lee teaches generating "6-bit gray signals" using "6-bit R gray signals of the previous and present frames" and using the 6 bit result to "output[s] finally modified 8-bit gray signals Gn'." Accordingly, Applicants

submit that Lee does not cure the deficiencies in the teachings of ARA and Morita with respect to the combined features of claim 11.

Applicants respectfully submit that ARA, Morita, and Lee, analyzed singly or in any combination, do not teach "comparing the reduced-bit source data of a current frame with reduced bit source data of a previous frame to modulate the source data by retrieving a stored preset modulated data in accordance with a result of the comparison" and "a bit number of the stored preset modulated data is more than that of the reduced bit source data of each of the previous frame and the current frame" as recited in claim 11. Accordingly, Applicants submit that claim 11 is allowable over ARA, Morita, and Lee.

Claims 12-17 each depend from claim 11 and each includes by reference all of the limitations of claim 11. Accordingly, Applicants submit that claims 12-17 are each allowable over ARA, Morita, and Lee at least by way of their dependencies and for the reasons given above for claim 11.

Applicants believe the foregoing amendments and remarks place the application in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required

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under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. *A duplicate copy of this sheet is enclosed.*

Respectfully submitted,

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